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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/727,269	11/29/2000	Karl M. Bizjak	51992-001	5505

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EXAMINER

WOO, STELLA L.

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/727,269

**Applicant(s)**

BIZJAK, KARL M.

**Examiner**

Stella L. Woo

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-64 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8</u> . | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-14, 17-32, 40, 46-61 are rejected under 35 U.S.C. 102(e) as being anticipated by Bird (US 5,784,476).

Regarding claims 1, 5-6, 9, 12-14, 24-25, 61, Bird discloses a signal processor system comprising:

a power estimation signal (digital audio input samples; col. 4, lines 36-41);

a variable attack and release stage for detecting changes in amplitude relative to time (amplitude analyzer 52 determines the amplitude level for a given time period; col. 4, lines 48-53) , comparing the changes (the amplitude level is compared with a too-quiet threshold and a too-loud threshold (col. 4, line 48 – col. 5, line 25), applying a first algorithm or applying a second algorithm (analyzer 52 applies a first or a second multiplying factor to multiplier 55 based on whether the level is below the too-quiet threshold or above the too-loud threshold; col. 4, line 59 – col. 5, line 39; col. 6, line 60 – col. 7, line 30).

Regarding claims 2-3, 7, 10, the degree of compression is dependent on the volume setting (col. 8, lines 12-18).

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Regarding claims 4, 8, 11, the threshold levels could be set by the listener (col. 8, lines 1-3).

Regarding claims 17-19, analyzer 52 calculates what the volume control position should be for a sample (col. 6, lines 20-40).

Regarding claims 20-23, 26-32, note col. 5, line 30 – col. 6, line 57.

Regarding claims 40, 46-60, note low-pass filter 43 (Figure 2).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 15-16, 33-39, 41-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bird in view of Peterson (US 6,678,382).

Bird differs from claims 15-16 in that it does not teach the use of a lookup table.

However, Peterson teaches the well known use of a lookup table for selecting values used to attenuate an audio signal as an alternative to computing the values (col. 2, lines 29-45) such that it would have been obvious to an artisan of ordinary skill to incorporate such a well known use of a lookup table, as taught by Peterson, within the system of Bird.

Bird differs from claims 33-39, 41-45 in that it does not specify a transform stage involving a polynomial equation. However, Peterson teaches the well known use of a polynomial equation in determining an attenuated value (col. 4, lines 42-65) such that it would

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have been obvious to an artisan of ordinary skill to incorporate such use of an equation, as taught by Peterson, within the system of Bird in order to control the volume logarithmically rather than linearly (col. 1, lines 20-22).

5. Claims 62-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bird in view of d'Alayer de Costemore d'Arc (US 5,530,761).

Bird differs from claims 62-64 in that it does not specify volume control according to a detected noise signal. However, d'Alayer de Costemore d'Arc teaches the desirability of adjusting the volume of sound as a function of the ambient sound signals (Abstract) such that it would have been obvious to an artisan of ordinary skill to incorporate such detection of noise in a volume control system, as taught by d'Alayer de Costemore d'Arc.

### ***Conclusion***


6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kaihotsu et al., Helms, Kato et al., Christoph show other volume control system which compensate for environmental noise.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stella L. Woo whose telephone number is (703) 305-4395. The examiner can normally be reached on Monday-Tuesday, Thursday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on (703) 305-4708. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Stella L. Woo  
Primary Examiner  
Art Unit 2643